

We claim:

S<sub>1</sub>  
S<sub>2</sub>

1. A visual user interface for a telephony device with a screen display, the visual user interface comprising:

a display screen including any two or more of the following display elements:

5 an application program selection area, including a display of user interface controls for selecting application programs;

a call slip area, including a call slip user interface for displaying telephone line state information; and

a customizable area; and

10 a user input device for enabling a user to enter input by selecting one or more of the above display elements.

2. The visual user interface of claim 1 wherein the customizable area includes one or more of the following display elements:

15 a branding pane for displaying a brand graphic;

a data/time pane for displaying data or time;

a message pane for displaying answering machine, e-mail or fax messages for one or more users; and

20 a task pane for enabling the user to select a service of the telephony device, including any one of the following services: a speed dial service, a compose e-mail service, a note-taking service, and an online directory service.

3. The visual user interface of claim 1 wherein the customizable area includes one or more user interface panes that each display user interface elements of a  
25 corresponding application program.

4. The visual user interface of claim 1 including a message usage interface pane that displays user interface elements visually depicting a type of message received by a user in the telephony device.

30

09303030-000000

5. The visual user interface of claim 4 wherein the user interface elements visually depicting a type of message comprise graphical icons indicating that the user has received a message.

Sub  
A3

5 6. The visual user interface of claim 4 wherein the graphical icons are user interface controls that respond to user selection from the input device by initiating a message viewer to view the corresponding message.

7. The visual user interface including each of the display elements of claim 1.

10 Sub  
A4

8. A visual user interface for a telephony device with a screen display comprising:

- 15 a display screen including any two of the following display elements:  
an application program selection area, including a display of user interface  
controls for selecting application programs;  
a call slip area, including a call slip user interface for displaying telephone line  
state information;  
a branding pane for displaying a brand graphic;  
a date/time pane for displaying date or time;  
20 a message pane for displaying answering machine, e-mail or fax messages for  
one or more users; and  
a task pane for enabling the user to select a service of the telephony device,  
including any one of the following services: a speed dial service, a compose an e-mail  
message service, a note-taking service, and an online directory service; and  
25 a user input device for enabling a user to enter input by selecting one or more  
of the above display elements.

9. The interface of claim 8 wherein the input device is a touch screen.

30 10. The interface of claim 8 wherein the input device is a cursor control device.

655230" 810E3E60

11. The interface of claim 8 wherein the input device is a keypad, keyboard or hardware button.

5 12. The interface of claim 8 wherein one or more of the display elements is customizable.

Sub  
As

13. A method for developing software to run on a screen phone, the method comprising:

10 receiving a shell program for displaying a user interface on a display screen of the screen phone;

receiving default pane programs that each display default panes in the user interface;

15 selecting one or more of the default pane programs to include in the user interface of the screen phone;

creating a custom pane program that displays a custom pane in the user interface; and

20 creating a custom application program that uses the custom pane as a user interface and communicates state changes in the custom application program to the custom pane program, the custom pane program being programmed to update information displayed in the custom pane in response to the state changes.

14. The method of claim 13 further including:

25 enumerating the custom pane program in a data structure of an operating system to enable the shell program to identify the custom pane and add the custom pane to the display screen of the screen phone.

665230" 8E0E0E0

15. The method of claim 13 further including:  
receiving a definition of a programming interface for a pane, where the  
programming interface includes a function for creating a pane in the display screen of  
the screen phone; and

developing code for the custom pane that implements the programming  
interface according to the definition, the code implementing the function for creating a  
pane.

16. The method of claim 13 including:  
receiving a set of application programs associated with the default panes  
for a selected default pane, selecting an associated application program from  
the set to be loaded onto and executed in the screen phone;  
wherein the associated application program uses the default pane as a user  
interface.

17. The method of claim 16 wherein the default pane programs include a  
message pane program for displaying a user interface for a message center application  
program in a message pane;

wherein the message center application program communicates state changes  
to the message pane program, and the message pane program updates the message  
pane to reflect the state changes.

18. The method of claim 17 wherein the state changes include arrival of a fax,  
email, or answering message in the screen phone, and the message pane updates the  
message pane by displaying an indicator of the arrival of the message.

19. A computer readable medium having programming modules that control  
the display of a user interface of a screen phone, the programming modules including:  
a shell program for controlling display of a user interface on a display screen of  
the screen phone;

